

**AMENDMENT**

In response to the Office Action dated September 20, 2002, please amend the above-referenced application as follows:

**In the Claims:**

Please add claims 14-25, which are set forth below:

14. (New) A neutron detecting device comprising:  
a semiconducting boron carbide layer; and  
a substrate layer coupled with the semiconducting boron carbide layer,  
wherein the semiconducting boron carbide layer is an electrically active region of the  
detecting device.

15. (New) The neutron detecting device of claim 14, further comprising:  
at least two electrodes, wherein one electrode is coupled with the  
semiconducting boron carbide layer, and wherein the other electrode is coupled with  
the substrate layer.

16. (New) The neutron detecting device of claim 15, further comprising:  
a bias voltage source; and  
an electrical detection device, wherein the bias voltage source and the  
electrical detection device are coupled with the two electrodes.

17. (New) The neutron detecting device of claim 14, wherein the substrate is  
formed of silicon.

18. (New) The neutron detecting device of claim 14, wherein the substrate is formed of metal.

19. (New) The neutron detecting device of claim 14, wherein the semiconducting boron carbide layer is p-type.

20. (New) The neutron detecting device of claim 19, wherein the substrate layer is n-type.

21. (New) The neutron detecting device of claim 14, wherein the semiconducting boron carbide layer contains at least 80%  $^{10}\text{B}$ .

22. (New) A neutron detecting device comprising:  
a first region formed of p-type semiconducting boron carbide; and  
a second region formed of n-type semiconducting boron carbide, wherein the first and second regions are electrically active parts of the detecting device.

23. (New) The neutron detecting device of claim 22, further comprising:  
at least two electrodes, wherein one electrode is coupled with the first region, and wherein the other electrode is coupled with the second region.

24. (New) The neutron detecting device of claim 23, further comprising:  
a bias voltage source; and